

CLAIMS

1. A complex filter comprising:
an I channel having a first I channel output and a second I channel output;
a Q channel having a first Q channel output and a second Q channel output;
5 wherein the second I channel output is input to the Q channel through a first passive network and wherein the second Q channel output is input to the I channel through a second passive network.
2. A complex filter as recited in claim 1 wherein the first passive network and the second passive network are RC networks.
- 10 3. A complex filter as recited in claim 1 wherein the second Q channel output is a low impedance output.
4. A complex filter as recited in claim 1 wherein the second I channel output is a low impedance output.
5. A complex filter as recited in claim 1 wherein the second Q channel output is at
15 the output of an op amp.
6. A complex filter as recited in claim 1 wherein the second I channel output is at the output of an op amp.
7. A complex filter as recited in claim 1 wherein the second I channel output is input to the Q channel at an input of an op amp.
- 20 8. A complex filter as recited in claim 1 wherein the second Q channel output is input to the I channel at an input of an op amp.
9. A complex filter as recited in claim 1 wherein the complex filter is used for image rejection.
10. A multiple feedback filter that includes two poles and a single op amp is
25 implemented in the I and Q channels. A first linking network of capacitors and resistors links a Q channel output back to an I channel input and a second linking network of capacitors and resistors links an I channel output back to a Q channel input.
11. A complex filter comprising:
an I channel having a first I channel output and a second I channel output;
30 a Q channel having a first Q channel output and a second Q channel output;

wherein the I channel includes a multiple pole filter having one op amp for every two poles.

12. A complex filter as recited in claim 11 wherein the Q channel includes a multiple pole filter having one op amp for every two poles.

5 13. A complex filter as recited in claim 11 wherein the complex filter is used for image rejection.

14. A complex filter comprising:

an I channel having a first I channel output and a second I channel output;

a Q channel having a first Q channel output and a second Q channel output;

10 wherein the I channel includes a two pole filter having not more than a single op amp.

15. A complex filter as recited in claim 14 wherein the Q channel includes a two pole filter having not more than a single op amp.

15 16. A complex filter as recited in claim 14 wherein the complex filter is used for image rejection.